



Ministry of Power
Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan, R. K. Puram, New Delhi-110066
Website: www.cea.nic.in



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To

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3. Member Secretary, Eastern Regional Power Committee, 14, Golf Club Road, Tollygange, Kolkata-700033. Tel. No. 033-24235199 Fax No. 033-24171358	4. Director (Commercial), Grid Corporation of Orissa Ltd, Jan path, Bhubaneswar-751022. Tel. No. 0674-2541127 Fax No. 0674-2543452
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9. General Manager, Eastern Regional Load Dispatch Center, 14, Golf Club Road, Tollygange, Kolkata- 700033. Tel No. 033-24235867 Fax No. 033-24235809	
NER Constituents:	
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3. The Chairman-cum-Managing Director, Meghalaya Energy Corporation Limited, Lum Jingshai, Short Round Road, Shillong (Meghalaya) – 793001. Fax: 0364 – 2590355/2591174	4. The Chief Engineer (Power), Vidyut Bhawan, Department of Power, Zero Point Tinali, Itanagar (Arunachal Pradesh) – 791111. Fax: 0360 – 2217302

5. The Chief Engineer, Department of Power, Nagaland, Kohima Fax: 0832 – 2426986	6. Engineer-in-Chief Power & Electricity Department, Govt. of Mizoram, Tuikhuahtlang, Aizawl (Mizoram) Fax:0389-2320862
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Sub: Summary record of discussions of the Joint Standing Committee Meeting of Eastern and North Eastern Region on Power System Planning held at 03-01-2014 at Guwahati.

Sir,

Minutes of the meeting for the Joint Standing Committee Meeting of Eastern and North Eastern Region on Power System Planning held at 03-01-2014 at Guwahati are available on the CEA website: www.cea.nic.in. (path to access-Wings of CEA/Power Systems/Standing Committee on Power System Planning/ Eastern Region, North Eastern Region).

Yours faithfully,



(K.K. Arya)

Chief Engineer (I/c) (SP&PA)

Minutes for the Joint Standing Committee Meeting of Eastern and North Eastern Region on Power System Planning held at Guwahati on 03-01-2014

List of participants is enclosed at **Annexure 1**.

- 1.1 Member Secretary (NERPC), CEA welcomed the participants to the Joint Standing Committee meeting of Eastern Region and North Eastern Region at Guwahati. He requested Director, CEA to start the proceeding of the meeting.
- 1.2 Director, CEA stated that CEA has circulated a concept paper on General Network Access (GNA) for ensuring adequacy in the planning and development of Inter-state transmission system. This is one of the series of the meetings which has been called to solicit the views of various stake holders. There are some agenda items pertaining to North Eastern Region, which would be discussed in the meeting. There after, Chief Engineer (SP&PA), CEA gave a presentation on the concept of GNA.
- 1.3 Chief Engineer (SP&PA) stated that concept of GNA has been proposed to remove difficulty in transmission planning and congestion in ISTS network, which has arisen due following:
 - i) Generators getting connectivity with ISTS without taking LTA because for connectivity no transmission system investment is envisaged in the present regulation.
 - ii) Generators not taking LTA for full quantum of their installed capacity.
 - iii) Generators taking LTA with target region as beneficiaries.
- 1.4 He added that under proposed GNA generators has to specify ex-bus generation and injection point. They need not specify drawal point. Similarly, drawing entity has to indicate quantum of drawal as GNA and need not specify the source of power. He then invited the constituents for their comments on the concept paper.
- 1.5 ER constituents were primarily of the opinion that they have suffered most due to introduction of PoC mechanism for determination of transmission tariff, which need to be addressed before introducing GNA concept. However, they were of the view that the issue would be deliberated in the next ERPC forum to be held on 17th January with the State-wise specific analysis on financial impact. They also pointed out the data presented in the concept paper like maximum load of the state and maximum drawal of power by the state needs to be checked.
- 1.6 NER constituents were of the view that LTA should be made mandatory for all IPPs. They were not agreeable to the STOA charge proposed under GNA approach, because they draw power heavily on short term basis during off monsoon periods. They impressed to continue drawal, as taking place presently on short term basis. They emphasized the need of further deliberation in the NERPC forum before commenting upon the GNA concept.

1.7 Chief Engineer, CEA requested all the constituents of ER and NER standing committee meeting to submit their views separately to CEA.

1.8 The constituents stated that they would furnish their views on GNA after deliberations at RPC forums.

2.0 Additional 1x315 MVA, 400/220 kV transformer at Bongaigaon Sub-Station:

2.1 Chief Engineer, CEA informed that the present transformation capacity at Bongaigaon (PG) 400/220 kV sub-station is 315 MVA which comprises of 4 no. single phase units of 105 MVA. Assam draws power over Bongaigaon (PG)-Salakati (PG)-BPTS-Agia 220 kV D/C line due to which the loading on the ICT becomes very critical and is expected to increase further with the growing demand. Further, tripping of the ICT restricts the import capability of NER on ER-NER transmission links which becomes very critical during low hydro condition. The addition of 2nd ICT at Bongaigaon has already been agreed in 90th OCC meeting of NER constituents at Guwahati held on 04-10-2013.

2.2 POWERGRID stated that as per norm, the addition of 2nd ICT at Bongaigaon need to be associated with 2 no of 220kV bays which would be helpful for Assam and Meghalaya to draw additional power. At present, Bongaigaon transformer is extended through 500m long line to Salakati substation, however there is no 220kV bay arrangement at Bongaigaon substation. The Salakati substation also does not have space for future 220kV line bays. Accordingly, the 2nd ICT at Bongaigaon need to be associated with new 220kV bus arrangement at Bongaigaon which would accommodate 220 kV bays for existing ICT and the proposed ICT, 220kV D/c Bongaigaon- Salakati line as well as 2 nos. of 220kV line bays for additional 220kV lines for drawal of power by Assam / Meghalaya. This 220kV bus arrangement would be carried out on GIS in view of space constraint. For accommodation of 220kV line bay at desired location of Salakati substation, necessary re-arrangement / shifting of existing 220kV bays also need to be carried out. For 220kV Bongaigaon-Salakati D/c line, fibre optic based protection shall be provided in view of severe ROW problem. Further, in order to have 2nd reliable auxiliary power supply, 1 No of 1 MVA, 33/0.44 kV Transformer is also to be installed in the tertiary of new proposed ICT, which was also agreed in 91st OCC meeting by NER Constituents held on 15.11.2013.

2.3 Therefore, in order to improve reliability, it was proposed to install second 1x315 MVA 400/220 kV (3 phase) transformer along with 220kV GIS bus arrangement (Double main) accommodating 2 bays for existing and the proposed ICT, 2 bays for 220kV D/c lines to Salakati and 2 bays for 220kV additional line at Bongaigaon (PG) and necessary re-arrangement / shifting of bays at Salakati substation for accommodating 220kV line bay.

2.4 After deliberation, members concurred to the above proposal to be implemented by POWERGRID under regulated tariff mechanism.

3.0 Replacement of existing 60MVA 220/132kV ICT by another 1x160MVA 220/132 kV ICT at Kopili HEP of NEEPCO.

- 3.1 Chief Engineer, CEA stated that there was initially 60 MVA (4 no. single phase units of 20 MVA incl. one spare) 220/132kV transformer at Kopili sub-station of NEEPCO which was later augmented by 1x160 MVA three phase transformer by POWERGRID. At present, the 60 MVA transformer at Kopili is not in operation. The 220/132 kV transformer at Kopili and 132 kV Kopili-Khandong 2xS/C lines are important links for power supply to South Assam, Mizoram, Tripura and Manipur. In the event of outage of this 1x160 MVA transformer, the power supply to South Assam, Manipur and Mizoram gets severely affected. Therefore, in order to improve the reliability, second 1x160 MVA 220/132 transformer was proposed at Kopili by replacement of the existing 60MVA 220/132kV ICT. The above proposal has already been agreed in 90th OCC meeting of NER constituents at Guwahati on 04-10-2013.
- 3.2 POWERGRID stated that the 220/132kV 2nd ICT at Kopili need to be associated with upgradation of 132kV bus scheme at Kopili from single bus to double main scheme for complete 132kV switchyard and the same need to be carried out on GIS due to space constraint. At 220kV side, the bay equipments of existing 60 MVA ICT needs to be replaced. Further, for 220kV double bus bar switching scheme, new bus bar protection along with LBB to be provided for the complete substation.
- 3.3 After deliberation, Members concurred the proposal of replacement of existing 60MVA, 220/132kV ICTs by 1x160 MVA 220/132 kV ICT at Kopili HEP of NEEPCO by POWERGRID along with upgradation/replacement of complete 132 kV bus scheme including switchgear etc. with GIS and 220kV bay equipments (AIS) and protection scheme under regulated tariff mechanism.

4.0 Replacement of existing 2x50MVA, 220/132kV ICTs by 2x160MVA, 220/132kV ICT at 400/220/132KV Balipara Substation of POWERGRID.

- 4.1 Chief Engineer, CEA stated that at present there are 2 no. of 50 MVA, 220/132kV ICTs installed at Balipara substation of POWERGRID, one owned by NEEPCO and the other by AEGCL. These ICTs are very important for supply of power to both Assam and Arunachal Pradesh. It has been observed that in most of the cases both the ICTs are fully loaded and tripping of one ICT often results in tripping of the other ICT. Tripping of these ICTs due to overload or due to maintenance results in the severe shortfall of power to both Arunachal and Assam. It is therefore proposed to replace these ICTs by 2x160MVA, 220/132kV ICTs by POWERGRID.
- 4.2 POWERGRID stated that the replacement of 220/132kV ICTs at Balipara would require replacement of 132 KV equipment of suitable capacity at Balipara.
- 4.3 After deliberation, members concurred the proposal of replacement of existing 2x50MVA, 220/132kV ICTs by 2x160MVA, 220/132kV ICTs along with replacement of 132 kV equipment at 400/220/132KV Balipara Substation by POWERGRID under regulated tariff mechanism.

5.0 System strengthening Scheme in NER-II (NERSS-II)

5.1 Chief Engineer, CEA stated that the following works were agreed by NER constituents as “**System strengthening Scheme in NER-II**” in the meeting held at Guwahati on 30-10-2012 to review the inter-state works of Comprehensive Scheme for Strengthening of Transmission System in NER & Sikkim:

- i) 2nd 400/220 kV, 315 MVA transformer at Balipara (PG)
- ii) LILO of 2nd ckt. of Silchar - Bongaigaon 400 kV D/c line at Byrnihat (MeECL)
- iii) Silchar - Misa 400kV D/c line (Quad) line
- iv) NER PP (Biswanath Chariyalli) – Itanagar (Ar. Pradesh) 132 kV D/C line (Zebra conductor).
- v) Replacement of existing 132/33kV, 2x10MVA ICT at Nirjuli by 2x50MVA ICT
- vi) Ranganadi HEP-Nirjuli (PG) 132kV D/c line with one ckt. LILoed at Itanagar S/s (Ar. Pradesh) or routed via Itanagar.
- vii) Imphal (PG) – New Kohima (Nagaland) 400kV D/c line (to be initially operated at 132kV)

5.2 He said that as the new transmission schemes except for exemptions provided under tariff policy, are to be implemented through tariff based competitive bidding (TBCB), the Empowered Committee on transmission in its 31st Meeting on February 18, 2013 at CERC, New Delhi suggested that CTU may obtain firm commitment from MeECL, Department of Power (DoP) Arunachal Pradesh, NEEPCO and DoP Nagaland for the availability of space for the bays for the termination of the above lines. Subsequently, MeECL intimated that there is no space at Byrnihat for termination of LILO of 2nd ckt. of Silchar - Bongaigaon 400 kV D/c line at Byrnihat (MeECL). Department of Power (DoP) Arunachal Pradesh confirmed that at Itanagar (Ar. Pradesh), there is space for 2 no. 132 kV line bays only. In view of above the scheme was modified and revised System strengthening Scheme in NER-II is given below:

- i) 2nd 400/220 kV, 315 MVA transformer at Balipara (PG)
- ii) Silchar - Misa 400kV D/c line (Quad) line
- iii) NER PP (Biswanath Chariyalli) – Itanagar (Ar. Pradesh) 132 kV D/C line (Zebra conductor).
- iv) Replacement of existing 132/33kV, 2x10MVA ICT at Nirjuli by 2x50MVA ICT
- v) Ranganadi HEP-Nirjuli (PG) 132kV D/c line Imphal (PG) – New Kohima (Nagaland) 400kV D/c line (to be initially operated at 132kV)

5.3 He added that it was proposed that i) and iv) elements of the modified scheme would be implemented by POWERGRID under regulated tariff mechanism and remaining elements would be implemented through TBCB. In addition, POWERGRID would provide 2 no. of 132kV line bays each at Biswanath Chariyalli (PGCIL), Nirjuli (PGCIL) and Imphal (PGCIL), 2 no. of 400kV line bays each at Silchar (PGCIL) and Misa (PGCIL), 1x80MVAR bus reactor at Misa and 1x80 MVAR switchable line reactors at Misa end on each circuit of the Silchar–Misa 400kV D/c line. Further, POWERGRID would also provide 2 no. of 132kV line bays

at Itanagar S/s of DoP, Arunachal Pradesh, 2 no. of 132 kV line bays (GIS) at Ranganadi Switchyard of NEEPCO and 2 no. of 132kV line bays at its New Kohima S/s of DoP, Nagaland. Bays at Silchar and Misa substations shall be equipped with GIS due to space constraint.

5.4 After detailed deliberation, Members agreed to the above proposal.

LIST OF PARTICIPANTS IN THE STANDING COMMITTEE MEETING OF ER & NER

Date: 5th January 2014 at Hotel Dynasty, Guwahati

S.N	ORGANISATION	NAME OF PARTICIPANT	DESIGNATION	CONTACT NO.	e-mail ID	SIGNATURE
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LIST OF PARTICIPANTS IN THE STANDING COMMITTEE MEETING OF ER & NER

Date: 3 January 2014 at Hotel Dynasty, Guwanati

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